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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/895,328	07/02/2001	Masaakira Horino	010830	6708

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EXAMINER

OSTRUP, CLINTON T

ART UNIT	PAPER NUMBER
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1614

125

DATE MAILED: 01/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/895,328

Applicant(s)

HORINO, MASAAKIRA

Examiner

Clinton Ostrup

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claims 2-14 are pending in this application.

Response to Applicant's Arguments/Amendment

Applicant's arguments and amendment filed October 1, 2002, Paper No. 7, to the rejection of claims 8, 10, 11, and 13-14 under 35 U.S.C. 112, second paragraph, have been fully considered and found convincing. Therefore, the said rejection has been withdrawn.

Applicant's arguments filed October 1, 2002, Paper No. 7, to the rejection of claim 2-14 under 35 U.S.C. 103(a) as being unpatentable over Nakane et al., **5,122,418**, and further in view of Peterson et al., **6,004,584**, have been fully considered, however the arguments are not deemed persuasive and the said rejection has been MAINTAINED for the reasons set forth in the previous Office Actions mailed January 15, 2002, Paper No. 4, and July 1, 2002, Paper No. 6 and those found below.

Applicants argue that "the claimed invention is directed to a powder of particle wherein a hydroxyapatite is layered on a surface of the base core substance particle as a first layer and zinc oxide is layered on the surface of the layer of such hydroxyapatite as a second layer" and that "the exact construction of a particle is neither disclosed nor suggested in the cited references." Applicant then argues, "Nakane et al. does not teach or suggest a hydroxyapatite layered on the surface of the base core substance particle and the zinc oxide layered on the surface of the hydroxyapatite layer."

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Although the examiner concedes that Nakane et al. does not specifically teach the specific construction of layers as claimed instantly, the examiner disagrees that it would not be obvious to one having ordinary skill in the art to modify the combined teachings of Nakane et al., and Peterson et al. to arrive at the instantly claimed invention.

Take for example, Nakane et al.'s teaching in col. 11, lines 18-32:

"The deodorant according to the present invention uses as its active deodorizing ingredient a composite powder constituted of the above-mentioned resin powder and hydroxyapatite; metal oxides such as zinc oxide, magnesium oxide, and calcium oxide; and/or halogen compounds hexachlorophene, benzethonium chloride, aluminum hydroxychloride, aluminum zirconium chlorohydrate, berberine chloride, chlorophyllin-copper complex, sodium copper chlorophyllin, and benzalkonium chloride. **Preferably hydroxyapatite, zinc oxide, and aluminum hydroxychloride**. These deodorant components may be preferably compounded in the deodorant in an amount 0.1 to 60 percent by weight. As other components of the deodorant, any known component can be used." (Emphasis added)

The reference teaches hydroxyapatite, zinc oxide, and aluminum hydroxychloride as the preferred active deodorizing ingredient. However, as discussed above, the specific sequence of coating is not specifically described. However, the selection of any order of mixing ingredients is obvious, particularly when the specified ingredients hydroxyapatite, zinc oxide, and aluminum hydroxychloride are taught to be the preferred active deodorizing ingredients. See: MPEP 2144.04, IV and 2144.06.

Therefore, applicants arguments are not convincing and as discussed Paper No. 4, and Paper No. 6, it would have been obvious to one having ordinary skill in the art to have modified the skin treatment powders of Nakane by coating

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powders with other shapes such as, the platelet shaped particles of Peterson, because of the expectation of obtaining a skin care agent capable of adsorbing moisture with powder carriers which are particularly formulated to provide good skin feel.

Applicant's arguments filed October 1, 2002, Paper No. 7, to the rejection of claim 2-14 under 35 U.S.C. 103(a) as being unpatentable over Nakane et al., **5,122,418**, and further in view of Kaji et al., JP 11-140819, have been fully considered, however the arguments are not deemed persuasive and the said rejection has been MAINTAINED for the reasons set forth in the previous Office Action mailed July 1, 2002, Paper No. 6 and those found below.

Applicants argue that "the claimed invention is directed to a powder of particle wherein a hydroxyapatite is layered on a surface of the base core substance particle as a first layer and zinc oxide is layered on the surface of the layer of such hydroxyapatite as a second layer" and that "the exact construction of a particle is neither disclosed nor suggested in the cited references." Applicant then argues, "Nakane et al. does not teach or suggest a hydroxyapatite layered on the surface of the base core substance particle and the zinc oxide layered on the surface of the hydroxyapatite layer." Applicant then disagrees with the examiner's conclusion of obviousness because of the amendments to independent claim 2 wherein the "particular arrangement of the powder" is no longer taught or suggested by the combination of references.

Although the examiner concedes that Nakane et al. does not specifically teach the specific construction of layers as claimed instantly, the examiner

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disagrees that it would not be obvious to one having ordinary skill in the art to modify the combined teachings of Nakane et al., and Kaji to arrive at the instantly claimed invention.

As discussed above, Nakane teaches hydroxyapatite, zinc oxide, and aluminum hydroxychloride as preferred deodorizing active ingredients. Kaji teaches a cosmetic pigmented hydroxyapatite plate crystal which is then coated with "fine-particle zinc oxide." See: page 12, first full paragraphs 1 and 2.

The secondary reference teaches cosmetic compositions comprising a tabular shaped hydroxyapatite and zinc oxide in a powdered form. See: Pages 16-17, Examples 1 and 2. The Kaji et al., reference teaches that tabular hydroxyapatite is better than spherical hydroxyapatite because, for example, it adheres and spreads better on the skin. See: Page 3, Subject and Solution.

Therefore, the examiner Maintains that although the specific coating sequence is not specifically taught by the references, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the resin treated hydroxyapatite cosmetic powders of Nakane et al., by using the tabular shaped hydroxyapatite and covering the hydroxyapatite powders as taught by Kaji et al., to form powders comprising resins substantially covered with tabular hydroxyapatite and then said tabular hydroxyapatite being covered by zinc oxide because of the reasonable expectation of obtaining a skin treatment powdered compositions with better spread and adhesion.

This being particularly obvious when the specified ingredients hydroxyapatite, zinc oxide, and aluminum hydroxychloride are taught to be the

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preferred active deodorizing ingredients by the primary reference, the secondary reference teaches coating hydroxyapatite with zinc oxide, and the idea of combining two compositions, each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose, flows logically from their having been individually taught in the prior art particularly when. See: MPEP 2144.04, IV and 2144.06.

Maintained Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 2-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakane et al. **5,122,418** (Nakane), and further in view of Peterson et al., **6,004,584** (Peterson).

Nakane discloses a composite powder wherein the core powder is covered with one or more powders wherein said composite powder could be used as a skin treatment agent or in sunburn preventing cosmetics, and deodorants. See: col.4, line 51- col. 6, line 11; claims 1-5 and abstract.

Nakane teaches the composite powder having an average particle size of 1 to 100 microns and zinc oxide having an average particle size of 0.01 to 1 microns, thus teaching the zinc oxide and powder sizes of instant claim 9. See: col. 7, line 25 – col. 10, line 44. The reference further teaches that a preferred deodorant composite powder contains a resin powder and hydroxyapatite, zinc oxide, and aluminum hydroxychloride and any other known component such as

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talc, bentonite, mica, etc., thus meeting the limitations of instant claims 1-2 and 5-6. See: col. 11, line 9 – col. 12, line 25.

The reference teaches that the skin treatment agent of their invention has a superior feel, adsorbs the decomposed sebum and maintains the skin in its normal state, thus teaching instant claim 13. See: col. 12, line 26 - col. 13, line 35.

Nakane teaches skin care agents and cosmetics comprising a composite powder covered by hydroxyapatite and zinc oxide as discussed above. Nakane teaches that a spherical particle includes deformed particles. See: col. 1, lines 14-44. However, the primary reference lacks the crystalline size and shape of instant claims 7-8.

Peterson teaches compositions for moisture adsorption comprising spherical particles as well as platelet-shaped particles. See: col. 1, line 5 – col. 2, line 34 and abstract. The reference teaches that the powder carriers of their invention provide good skin feel characteristics and are used where increased levels of moisture absorbers are included in body powders. See: col. 2, line 40 – col. 4, line 11. The secondary reference teaches that zinc oxide is preferably added to the composition as an antimicrobial agent and that mica, talc, etc., are the platelet shaped particles useful in their invention. See: col. 4, lines 35 – 68 and col. 5, line 43 – col. 6, line 4.

It would have been obvious to one having ordinary skill in the art to have modified the skin treatment powders of Nakane by coating powders with other shapes such as, the platelet shaped particles of Peterson, because of the

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expectation of obtaining a skin care agent capable of adsorbing moisture with powder carriers which are particularly formulated to provide good skin feel.

Claims 2-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakane et al. **5,122,418** (Nakane) as applied to claims 2-6 and 9-14 above, and further in view of Kaji et al., JP 11-140819.

Nakane teaches skin care agents and cosmetics comprising a composite powder covered by hydroxyapatite and zinc oxide as discussed above. Nakane teaches that a spherical particle includes deformed particles. See: col. 1, lines 14-44. However, the primary reference lacks the crystalline size and shape of instant claims 7-8.

Kaji et al., teach cosmetic compositions comprising a tabular shaped hydroxyapatite and zinc oxide in a powdered form. See: Examples, pages 1-4. The Kaji et al., reference teaches tabular hydroxyapatite is better than spherical hydroxyapatite because, for examples, it adheres and spreads better on the skin. See: Abstract, Prior art, and Effect of Invention. Kaji et al., teach hydroxyapatite as being mixed and covered with various organic and inorganic compounds, which use the hydroxyapatite as a nucleus and then form a covering or surface treatment on the hydroxyapatite. See: Means, pages 1-3.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the resin treated hydroxyapatite cosmetic powders of Nakane et al., by using the tabular shaped hydroxyapatite and covering the hydroxyapatite powders as taught by Kaji et al., to form powders comprising resins substantially covered with tabular hydroxyapatite and

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then said tabular hydroxyapatite being covered by zinc oxide to deliver powdered compositions with better spread and adhesion.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. KURODA, AKIHIRO, JP 10-204317, is pertinent to applicant's disclosure in that it teaches a zinc oxide powder composited with an inorganic powder, the inorganic powder used being apatite or hydroxyapatite.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clinton Ostrup whose telephone number is (703) 308-3627. The examiner can normally be reached on M-F (8:30am-5:00pm).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marianne Seidel can be reached on (703) 308-4725. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-4556 for regular communications and (703) 308-4556 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1235.

FREDERICK KRASS
PRIMARY EXAMINER
(703) 308-1235



Clinton Ostrup
Examiner
Art Unit 1614



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January 9, 2003